

**WEST**[Help](#)[Logout](#)[Interrupt](#)[Main Menu](#)[Search Form](#)[Posting Counts](#)[Show S Numbers](#)[Edit S Numbers](#)[Preferences](#)**Search Results -**

Terms	Documents
113 and countri\$	12

**Database:**

US Patents Full-Text Database	▲
US Pre-Grant Publication Full-Text Database	
JPO Abstracts Database	
EPO Abstracts Database	
Derwent World Patents Index	
IBM Technical Disclosure Bulletins	▼

[Refine Search:](#)[Clear](#)**Search History****Today's Date: 11/26/2001**

<u>DB Name</u>	<u>Query</u>	<u>Hit Count</u>	<u>Set Name</u>
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	113 and countri\$	12	<a href="#"><u>L19</u></a>
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	117 and symbol	1	<a href="#"><u>L18</u></a>
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	115 and ticke\$	3	<a href="#"><u>L17</u></a>
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	115 and ticke\$ same identifi\$	0	<a href="#"><u>L16</u></a>
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	113 and ((705/\$)!.CCLS.)	16	<a href="#"><u>L15</u></a>
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	111 and (normaliz\$ same symbol or identifi\$)	0	<a href="#"><u>L14</u></a>
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	110 and (normaliz\$ same symbol or identifi\$)	95	<a href="#"><u>L13</u></a>
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	110 and normaliz\$ same symbol or identifi\$	668457	<a href="#"><u>L12</u></a>
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	110 and normaliz\$ same symbol	0	<a href="#"><u>L11</u></a>
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	19 and fields	97	<a href="#"><u>L10</u></a>
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	18 and character same string	99	<a href="#"><u>L9</u></a>
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	17 and template	371	<a href="#"><u>L8</u></a>
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	16 and relational adj database	1323	<a href="#"><u>L7</u></a>
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	global or world adj wide or universal with stock with symbol same identi\$	73631	<a href="#"><u>L6</u></a>
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	global or world adj wide or universal with stock with symbol or identi\$	1305201	<a href="#"><u>L5</u></a>
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	11 and ticke\$ near identifi\$	9	<a href="#"><u>L4</u></a>
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	11 and (master same abbreviation or global same abbreviation)	28	<a href="#"><u>L3</u></a>
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	11 and master same abbreviation	9	<a href="#"><u>L2</u></a>
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	stock same symbols or global same symbols or global same name or alias same name	5107	<a href="#"><u>L1</u></a>

**WEST**☐ **Generate Collection**

L31: Entry 30 of 32

File: USPT

Jun 8, 1982

DOCUMENT-IDENTIFIER: US 4334270 A  
TITLE: Securities valuation system

BSPR:

There are today approximately 9,000 different corporate securities which are actively traded on the New York Stock Exchange, the New York Bond Exchange, the American Stock and Bond Exchanges, the Midwest and Pacific Coast Regional Exchanges, and the N.A.S.D.A.Q. Over-the-Counter Market. There are at least that many additional securities of smaller corporations which are publicly held but less actively traded. A securities broker might well expect to find any of these securities in a customer's portfolio and will, in the regular course of business, have to periodically value these securities and the portfolio as a whole.

BSPR:

Of the 11,700 securities described above, there are about 30 changes of significance each day. These changes include stock splits, stock dividends, mergers, name changes, ticker symbol changes, new securities listings, transfers of securities from one exchange to another, or delistings.

BSPR:

In addition, each security is assigned a unique "ticker-symbol" comprising one to six characters, usually mnemonically related to the name of the security. This system of abbreviation is more commonly used than the other two by investors, registered representatives, traders, advisers, and "front-office" personnel because it is shorter and easier to remember.

BSPR:

Although both the Bunker-Ramo number and CUSIP number may be used internally, the "ticker symbol" is the customary external method of accessing securities pricing information in any quotation system, and in the printing quotation system making up the invention.

BSPR:

In producing a portfolio valuation schedule, the operator need only enter the ticker symbol for the Group 1 securities, the ticker symbol and the latest price for the Group 2 securities and the Group 3 supplemental securities in order to produce a valuation schedule of the portfolio.

BSPR:

The accuracy of the reports is obviously greatly enhanced by the fact that all calculations are made automatically by a digital computer. Similarly, all formatting, sorting, alphabetizing and typing is machine-controlled. Accuracy is further insured by an extensive system of cross-reference files, which automatically adjust the valuation schedule to reflect mergers, stock dividends, name changes, ticker symbol changes and the like which may have occurred since the publication of the latest VALPORT Securities Index (for which I claim a copyright), or since the previous portfolio valuation.

BSPR:

In addition, the `MOVE` option creates a cross-reference trail of any security moved in the files. The Master System Operator can also use this program to shift a security within the Group 1 securities files, within the Group 2 securities files, or to move a security from Group 1 to 2, or from Group 2 to 1. Moreover, the Master System Operator can `merge` securities, making an entry in the ticker symbol cross-reference file \*\*SYMx1 and the security number cross-reference file \*\*OLDNEW#1. He can also change a ticker symbol and/or security number, making the

appropriate cross-reference entries to the ticker symbol and security number cross-reference files, if necessary. An ordinary user can use the program in a more limited fashion to move securities within his supplemental securities file, or to cross-reference them to the Group 2 or Group 1 files.

BSPR:

There are 12 of these files. Six are active at any given time and six are mirror-image copy files. The files are controlled and the active protected names appear in \*\*CONTPORT and are accessed as Y\$(1) through Y\$(6). The sequence of Records is alphabetical by ticker symbol (characters 1-7) in ascending alphabetical sequence.

BSPR:

This is a symbol cross-reference file, \*\*SYMx1, which is updated to SYMX2 and copied back. The Records are in ascending alphabetical order by old ticker symbol.

BSPR:

Alphabetically sorted ticker symbol files for every letter of alphabet. The purpose is to allow lookup of new security number rather than manually enter number. It is accessed in the \*\*PRICESEC and \*\*VALSEC (MOVE) programs.

BSPR:

The sequence of records is alphabetical by ticker symbol (characters 1-7) in ascending sequence.

BSPC:

\*\*Y01--\*\*Y12--Master Ticker Symbol to Security Number Cross-reference File

BSPC:

\*\*SYMx1--Ticker Symbol Cross-reference Files

BSPC:

X01-User Supplemental Security Ticker Symbol Files

BSPU:

Ticker Symbol File Selection Routine

BSPU:

Ticker Symbol Data Retrieval Routine

BSPU:

OLD/NEW Ticker Symbol Lookup Routine

BSTL:

New York Stock Exchange Approximately 2000 Securities  
New York Bond Exchange Approximately 2100 Securities  
American Stock Exchange Approximately 1300 Securities  
Bond Exchange Approximately 250 Securities  
NASDAQ (over-the-counter) Approximately 3200 Securities  
Pacific Coast Stock Exchange Approximately 60 Securities  
Midwest Stock Exchange Approximately 50 Securities  
TOTAL Approximately 9,000 Securities

BSTL:

FILE DESCRIPTIONS	Name	Description
validation codes	**CONTPORT	VALPORT master control M\$(1-50) Master security
**Y01-Y06	<u>Ticker symbol</u>	to security number cross-reference **SYMx1-2 OLD to NEW
<u>ticker symbol</u>	cross-reference	**OLDNEW#1-#2 OLD to NEW security number
cross-reference	**GFIFILE	Master control of Bunker-Ramo source files **ANYSE01-04
Bunker-Ramo source files	(accessed **BASE001-3	once daily to update VALPORT
files)	**COTC001-3	**DNYBE01-04 **EPCSE01-02 **FMWSE01
Daily exception list	**SYM#A-Z	USER FILES CATALOG1 User control variables;
representatives initials	CONTROL1	Control file for user files METERA Monthly
usage report	TEMPO	Temporary portfolio storage X01,X02 User supplemental security
<u>ticker symbol</u> /security number	cross-reference	S01,02,03 User supplementary
securities 04,05	P01,02,03	User permanent portfolio storage 04,05 OLDNEW#1-#2 Old
to NEW security number	cross-reference	

BSTL:

Field No.	Field Code	Field Description
1	X\$ (1)	Hexadecimal buffer dump 2 X\$ (2)
3	X\$ (3)	Hexadecimal upper case shift 4 X\$ (4)
5-34	M (30, 1)	Securities control number (lowest security in each of securities masterfiles)
35	D0	Daily price date (YYMMDD)
36	B0	Monthly price date (YYMMDD)
37	N0	Last Group 2 (+suppl) security number assigned
38	A\$ (1)	ABCDEFGHIJKLMNOPQRSTUVWXYZ 39 A\$ (2)
40	A\$ (3)	0123456789 41 A\$ (4)
42-53	D\$ (1-12)	Names of all months 54-95 E\$ (1-32)
96-145	I\$, J\$ (1-25)	Names of securities classification codes
146-151	Y\$ (1-6)	Ticker symbol file names
152-176	M\$ (1-25)	Securities file names
177-188	Y\$ (7-12)	Ticker rewind file name
189-213	M\$ (26-50)	Securities rewind file name

BSTL:

Field No.	Field Code	Field Description
1	N1	Number of records in file RECORD
3,14	T\$	Security name (first 18 characters)
4,15	U\$	Ticker symbol 5,16
6,17	N3	Security number 7,18
8,19	E3	Earnings/maturity 9,20
10,21	V3	Daily price 11,22
12,23	Y3	Stock dividend date 13,24
14,25	Z3	Stock dividend amount

BSTL:

File Contains Symbols
**Y01 +AAA-+FZZ (Group 2) **Y02 +GAA-+NZZ
(Group 2) **Y03 +OAA-+ZZZ (Group 2) **Y04 AAA FZZ **Y05 GAA NZZ **Y06 OAA ZZZ
Field No. Field Code Field Description
1 N1 Number of items in file RECORD FIELDS
(N1) - - - - - 2,3. . . X\$ Ticker symbol/security number
Example of a Typical Record
##STR1## ##STR2## ##STR3## Symbol Blank
Security number

BSTL:

Field No.	Field Code	Field Description
1,2	Q\$	Old and new ticker symbols
(End-of-file is marked by Q\$ = "END**")		
Example of a typical Record		##STR4##
##STR5## ##STR6## Old ticker Blank New ticker		

BSTL:

Field No.	Field Code	Field Description
**ANYSE01-04 New York Stock Exchange		
**BASE001-003 American Stock Exchange **COTC001-003 Over-the-Counter (NASDAQ)		
**DNYBE01-04 New York Bond Exchange **EPCSE01-02 Pacific Coast Stock Exchange		
**FMWSE01 Midwest Stock Exchange & American Bond Exchange		
Field No.	Field Code	Field Description
1	A	Security number 2 A\$ Security name
(begin) 3	B\$	Security name (end) 4 C\$ Ticker symbol (1-7)
5	B	CUSIP (10-18)
6	C	Clearinghouse number 7 D High price 8 E Low price 9 F Last price
10	G	Close price 11 H Adjusted close price 12 I Yearly high price 13 J Yearly low price
14	K	Bid price 15 L Offer price 16 M Previous bid price 17 N Earnings indicator
18	O	Quarterly earnings 19 P Annual earnings 20 Q Ex-dividend indicator
21	R	Dividend payment indicator 22 S Stock dividend of indicator 23 T Quarterly dividend
24	U	Annual dividend 25 V Stock dividend percent 26 W Cash dividend date
27	X	Stock dividend date 28 Y Volume 29 Z Round lot indicator (End-of-file marked by A=0)

BSTL:

CATFILE1 A reference file in security number sequence of next Securities Index. CATFILE Same as CATFILE1 but in alphabetical sequence. SECBOOK1 Printfile which controls high speed printer. CATFILE2 A reference file in Security Number Sequence of current published Securities Index. SUPPFIL1 Cumulative supplement file to CATFILE2 in numeric sequence. SUPPFILE SUPPFIL1 in alphabetical sequence. CATREF Contains date of CATFILE1 and Security Numbers contained in CATFILE1.

Field No.	Field Code	Field Description
(begin) 2,7. . .	T\$	Name (end) 3,8. . .
U\$	Ticker symbol	4,9. . .
N3	Security number	5,10. . .
C3	Economic code	CATFILE2 1 D5 Date YYMMDD 2-6,7-11. . .
S\$,T\$,U\$,N3,C3	See CATFILE1 SUPPFIL1 (and SUPPFILE)	1-5,13-17. . .
S\$,T\$,U\$,N3,C3	See CATFILE1 6,18. . .	T3 Record type* 7-11,19-24. . .
V\$,W\$,X\$,W4,C4	Same fields for new record 12,24. . .	T4 Record type* *Types: 1. Addition 2. Deletion 3. Old Record 4. New Record

BSTL:

EXCPLIST 1,6. . . S\$ Name (begin) 2,7. . . T\$ Name (end). 3,8. . . U\$ Ticker Symbol 4,9. . . N Security Number 5,10. . . C\$ Blank for addition \*\*\* for deletion Ticker symbol if Ticker symbol change END\*\* End of File

BSTL:

Field No.	Field Code	Field Description
1,3. . .	A\$	<u>Ticker symbol</u> 2,4. . .
N		Security number

BSTL:

Field No.	Field Code	Field Description
1	X\$	Portfolio shortname 2,3 N\$,O\$ Full account name 4 R8 Representative number 5 D8 Latest valuation date (YYMMDD) 6 D9 Previous valuation date (YYMMDD) 7 N2 Number of issues in portfolio 8 T2 Portfolio type 9 C2 Cash balance RECORD FIELDS (N2) - - - - -
10,16. . .	P( ,1)	Security number 11,17. . . P( ,2) Classification code 12,18. . . P( ,3) Amount (shares or \$ bonds) 13,19. . . P( ,4) Current price 14,20. . . P( ,5) Total customer cost 15,21 P( ,6) Previous price (N2*6)+10,+19 S\$( ) Security name (1st 18 characters) +11,+20 T\$( ) Security name (last 18 characters) +12,+21 U\$( ) <u>Ticker symbol</u> +13,+22 D ( ) Dividend/interest +14,+23 E ( ) Earnings/maturity +15,+24 V ( ) Daily price +16,+25 W ( ) Month-end price +17,+26 Y ( ) Stock dividend date +18,+27 Z ( ) Stock dividend amount

BSTL:

File Contains	Symbols	
X01-02	=AAA - =ZZZ (Group 3)	
Field No.	Field Code	Field Description
1	N1	Number of items in file RECORD FIELDS
(N1) - - - - -	2,3. . .	X\$ <u>Ticker symbol</u> /security number
Example of a Typical Record		
##STR7## ##STR8## ##STR9## <u>Ticker symbol</u>		
Blank Security number		

BSTL:

Field No.	Field Code	Field Description
1	N1	No. of records in file RECORD FIELDS
(N1) - - - - -	2,13. . .	S\$ Security name (first 18 characters)
3,14. . .	T\$	Security name (last 18 characters) 4,15. . . U\$ <u>Ticker symbol</u> 5,16. . . N3 Security number 6,17. . . C3 Classification code 7,18. . . D3 Dividend/interest 8,19. . . E3 Earnings/maturity 9,20. . . V3 Daily price 10,21. . . W3 Month-end price 11,22. . . Y3 Stock dividend date 12,23. . . Z3 Stock dividend amount

DEPR:

The file CONTROL1 is then opened. In it is put an initial number (9,900,000) for the initial user supplemental security number, the names of each of the five portfolio files (P01 through P05), the names of the two user symbol ticker files (X01 and X02) and the names of the five user supplemental security files (S01 through S05). The file is then closed.

DEPR:

Each portfolio file (P01-P05), symbol ticker file (X01-X02), and supplemental security file (S01-S05) is opened and initialized by placing a numeric zero in the first field. Each file is then closed. Files CONTROL2 and TEMPO are opened as input files to test for their existence, and files OLDNEW#1 and OLDNEW#2 are opened as output files, initialized with numeric 0 in the first field, and closed. This procedure initializes all files and ensures that the user has made

no error in establishing them.

DEPR:

The \*\*CONTPORT file is opened and the four hexadecimal characters are read into the first four positions of the X\$ array. The 30 security file control variables are then read into array M. The current date, monthly date, the highest supplemental security number, the alphabet, the numerals, the ticker symbol control file variable, the months of the year, the fractions, economic codes, and symbol and security file names are read and stored in the appropriate arrays and variables.

DEPR:

If the portfolio is to be entered from the keyboard, a sample line for formatting purposes is printed with or without a field for costs, depending on the answer to the previous question. The user then types in the number of shares, the ticker symbol, and, optionally, customer's cost for each issue.

DEPR:

This routine alphabetically sorts the portfolio ticker symbols created above. A numeric array I(S) is built up in which the values in order correspond with the row number of the security in array U\$(S) alphabetically sorted by symbol.

DEPR:

The routine involves two nested loops. In the first loop, each security is compared for the lowest alphabetic value. In each subsequent loop, each previously identified security is passed over during the comparison by filling a third array, X(S), successively with a constant value which indicates that the security should be bypassed in future comparisons. The value in I(1) therefore is the row number of lowest alphabetic value, and in I(2) is the next lowest alphabetic value, etc.

DEPR:

The program then compares each ticker symbol in sequence to see if it is less than +G, +O, A, G, O, or 99 (A\$(4) of \*\*CONTPORT) to determine the proper ticker symbol to security number cross reference file (\*\*Y\$1-6).

DEPR:

For example, the ticker symbol comparison for IBM will set variable L equal to 5 since that ticker symbol will be in the fifth master ticker symbol to security number cross-reference file. Actually, that ticker symbol will be either in file Y05 or Y11 depending on which is the then currently active file. The variable Y\$(5) from the previously opened \*\*CONTPORT file will identify the correct file so that the statement "OPEN 1, Y\$(L), INPUT" will open the correct file Y05 or Y11 to retrieve IBM.

DEPR:

The correct ticker symbol file is then opened. This file contains the SYMBOL/SECURITY NUMBER variables alpha-sorted by symbol, e.g.:

DEPR:

If the file contains over 20 records, the first 20 variables are read into F\$(1) . . . F\$(20). The 20th is compared with the desired ticker symbol. If the desired ticker symbol is greater, 20 more are read successively until the 20th is equal to or greater than the desired ticker symbol. (If the file contains 20 items or less, the program reads each one of the records individually.)

DEPR:

When 20 are to be searched, or when the last group of 20 or less is reached, each ticker symbol in the group is compared with the desired ticker symbol.

DEPR:

When found, the variable A\$ contains the ticker symbol in the positions 1 through 7 and the security number in alpha form in positions 12 through 18. If no match is found, the \*\*SYMXX1 cross-reference file is searched for a new ticker symbol.

DEPR:

If during the ticker symbol retrieval routine, the symbol being sought is not found, the program then branches to this routine. File \*\*SYMXX1 is opened. This file contains a string of records, each of which has the outdated ticker symbol

and its corresponding newer or current ticker symbol. In either case, when a match is found, the program then branches back to the ticker symbol file selection routine and then the ticker symbol data retrieval routine. If, in this process, the new ticker symbol is not found, perhaps because it has again been modified, the program again goes back to this OLDNEW routine and looks for yet another current ticker symbol corresponding to the newer ticker symbol.

DEPR:

If the ticker symbol sought is not found anywhere, the terminal prompts the user to enter a corrected ticker symbol or to enter a zero instructing the system to bypass the incorrect security.

DEPR:

Once the correct symbol/number record is found, variable K\$ is set equal to the last seven characters of variable A\$ (the ticker/number pair) and variable A\$ is set to contain only the first seven characters; i.e., the symbol alone.

DEPR:

After the security number numeric sort, the program proceeds to this routine. Each security number in the array is compared with the security number in the M array and, when the security number in the M array is greater than or equal to the sought security number, the variable L identifies the master security file. The program then proceeds to look up the security data.

DEPR:

The identified portfolio file is opened and the number of portfolios in the file is read. The portfolio heading for each portfolio is read sequentially. If the portfolio shortname does not match the desired one, the system bypasses the unwanted portfolio array data and then retrieves the next portfolio heading. If the end of the portfolio is reached without finding a match, the terminal types that the portfolio shortname is not in the files and requests another file name.

DEPR:

Otherwise, the terminal prints each ticker symbol in sequence by security name and allows the operator to enter the total cost for each security. The program then changes the portfolio type, decreasing it by one, to indicate it contains cost information.

DEPR:

The operator is then asked if he wishes to record any sales. If so, he is prompted to enter the amount (shares or \$ bonds), ticker symbol, and (optionally), the cost of the securities sold. The portfolio data is adjusted accordingly.

DEPR:

When all sales have been recorded, the operator is asked if he wishes to enter any purchases. If so, he is prompted to enter the amount, ticker symbol, and (optionally), the cost. For each such security, the system checks to see if the security is held in the portfolio. If so, the data is adjusted accordingly. If not, the system branches to the Ticker Symbol File Selection Routine and Ticker Symbol Data Retrieval Routine to find the security number; the Master Security File Selection Routine and Master File Data Retrieval Routine to retrieve the appropriate data for each such purchase.

DEPR:

A standard mutual fund discount schedule is next read, and control branches to the alpha Tag Sort Routine by ticker symbol, the Ticker Symbol File Selection Routine, the Ticker Symbol Data Retrieval Routine, the Alphabetic to Numeric Conversion Routine, followed by a numeric tag sort routine based on security number.

DEPR:

Each of the records in the Bunker-Ramo files A\$(1)-A\$(17), should match a corresponding record in the VALPORT files, M\$(11)-M\$(25), for the records in both sets of files are sorted in security sequence. If the ticker symbols match, the program puts into the daily price field of the VALPORT record the price variable appearing in one of the following fields (in the preference stated) from the Bunker-Ramo files: namely, the last price, close price (yesterday's last price), bid price, or asked price, as well as any new dividend, earnings, stock dividend



date and stock dividend amount. (If the update is taking place on the day following the close of business of the first day of a new month, the old month-end price is discarded, and the previous day's closing price is transferred to the month-end price field before the new daily price is copied.)

DEPR:

On any given day, there will normally be about 9,000 matches and from 10 to 40 exceptions. These exceptions will be: a new security added to the Bunker-Ramo data, a security deleted from the Bunker-Ramo data, a security moved in the Bunker-Ramo file, or a security with a new ticker symbol or name. The VALPORT files completely parallel the Bunker-Ramo files with one exception at present. Stocks on the Pacific Coast Stock Exchange (which has about 50 stocks exclusively listed there and about 1,000 stocks also listed on the New York or American Exchange) are included in VALPORT only if they are exclusively listed on PCSE. Moreover, since the Bunker-Ramo data contains only zeroes in the fields associated with bond interest rates and maturities, the correct data stored in VALPORT is not disturbed.

DEPR:

The program prompts the operator to enter a ticker symbol, checks that it contains 6 characters or less, and (for the master user) does not begin with "=".

DEPR:

When the ticker symbol supplied by the master operator is "+, , ," or the security supplied by the user is "=. . .", representing Group 2 or Group 3 securities, the program automatically assigns a security number based on the latest Group 2 or Group 3 number.

DEPR:

Control then branches to the Ticker Symbol File Selection Routine, where the proper file, Y\$ (1-12) or Y\$ (7-8), is selected and opened for input together with its backup for output.

DEPR:

The first control field is increased by 1 to indicate the addition of a new security. Control then branches to the Ticker Symbol Data Retrieval Routine in which the contents of the old ticker symbol file are merged with the new ticker symbol and copied into the backup file.

DEPR:

Control then branches to the Master Security File Selection Routine and the Master Security Data Retrieval Routine in which the old file is merged together with the new security record and copied into the backup file. The File Name Flip-Flop Routine for both the security and ticker symbol files is then performed simultaneously so that the new record will be activated simultaneously in the ticker symbol file and master securities file. The master control file is then rewritten.

DEPR:

The meter is then adjusted to reflect the addition of a new security and ticker symbol. Control then returns to prompt the entry of another new ticker symbol. If the symbol is zero, the program ends.

DEPR:

This program is used to retrieve data about individual securities from the master security file when queried with the ticker symbol.

DEPR:

The user is prompted to enter a ticker symbol, and program control then branches to the Ticker File Selection Routine, the Ticker Symbol Data Retrieval Routine and, when the ticker symbol is found, the Alpha to Numeric Conversion Routine for the security number. The terminal then prints the ticker symbol and security number and goes through the Master Security File Selection Routine, the Master Security Data Retrieval Routine, and prints out the full name, economic code, dividend or interest, earnings or maturity, daily price and month-end price. The program then branches back and asks for another symbol. If it is zero, the program terminates.

DEPR:

The program begins with the Control File Variable Retrieval Routine. The operator is then prompted to supply a ticker symbol. It is checked to see if it begins with "=", indicating an error condition for the master operator.

DEPR:

Control branches to the Ticker File Selection Routine and the Ticker Symbol Data Retrieval Routine.

DEPR:

In a routine similar to that of \*\*VALPORT(DEL) the ticker symbol file is copied over to its backup while blocking out the ticker symbol to be deleted.

DEPR:

In this process the initial numeric field is rewritten to reflect one less ticker symbol in the file.

DEPR:

After these procedures, a tandem File Name Flip-Flop Routine for the ticker symbol file names and the security file names is performed to allow simultaneous updating of the new files.

DEPR:

Control then branches to the Ticker Symbol File Selection Routine, the Ticker Symbol Data Retrieval Routine, the Alpha to Numeric Conversion Routine, the Master Securities File Selection Routine and the Master Securities Data Retrieval Routine to locate the desired security.

DEPR:

Following the edit the new record is copied to the backup file, together with all of the remaining records in the security file. Control then branches to the File Name Flip-Flop Routine, and the control file is rewritten. The program then branches back to determine if there is a new ticker symbol to be edited. If a zero is entered, the program terminates. \*\*VALSEC(EDITPRI) - N72EPRI - EPRIOBJ

DEPR:

This program is an abbreviated version of the VALSEC(EDIT) program using the same coding while bypassing certain sections. The user initially supplies a ticker symbol and price for the security whose price he wishes to change.

DEPR:

The program then goes through the Control File Variable Routine, determines whether the ticker symbol begins with "=", goes to the Ticker Symbol File Retrieval Routine, the Ticker Symbol Data Retrieval Routine, the Alpha to Numeric Conversion Routine, the Master Security File Selection Routine, and the Master Security Data Retrieval Routine, copying over the records to the backup file with the edited data for the selected security. Next, the file name Flip-Flop Routine is executed, and the control file rewritten. If a ticker symbol of zero is entered, the program terminates.

DEPR:

This is a multi-purpose program that allows the VALPORT Master System Operator or any VALPORT user to move securities within the system to reflect changes of ticker symbols, mergers with other securities, movements from one exchange or another, or movements from Group 1, 2, or 3 to another Group.

DEPR:

A security may effectively be "moved" by a combined use of the \*\*VALSEC `DEL` and `NEW` programs. The change should preferably be done through the \*\*VALSEC `MOVE` program to insure a proper trail and cross-reference. In this way, a portfolio referring to the outdated ticker symbol or security number can be valued based on the current security data.

DEPR:

User Option 1. This program will change an existing user Group 3 security ticker symbol by deleting the old ticker symbol from the ticker symbol file, adding the new ticker symbol to the file, and noting the new ticker symbol in the proper field of that security record in the securities file. (The security number is not changed.)

DEPR:

User Option 2. The program will merge a Group 3 security with an existing Group 3 security by deleting the old ticker symbol, deleting the old security record, and adding a record to the OLDNEW#1 file showing the two security numbers and the exchange rate.

DEPR:

User Option 3. The program will merge a Group 3 security with either a Group 2 or Group 1 security by deleting the old ticker symbol, deleting the old security record, and adding a record to the OLDNEW#1 file, cross-referencing the system to the security in the VALPORT master files.

DEPR:

Master Option 1. The program will change an existing Group 2 security to a new Group 2 security by deleting the old ticker symbol, re-entering the new ticker symbol, noting the new ticker symbol field in the master security record, and putting a new record in the SYMX1 ticker-symbol-to-ticker-symbol cross-reference.

DEPR:

Master Option 2. The program will merge an existing Group 2 security into another existing Group 2 security by deleting the old ticker symbol, deleting the old security record, and putting a cross-reference trail in the SYMX1 and OLDNEW#1 file for ticker symbol and security number cross-reference.

DEPR:

Master Option 3. The program will transfer an existing Group 2 security to a new Group 1 security by deleting the old ticker symbol and security record, going to the \*\*SYM#A-Z files for the new Bunker-Ramo security number, entering the new ticker symbol and security record, and cross-referencing both in the SYMX1 and OLDNEW#1 file.

DEPR:

Master Option 4. The program will merge an existing Group 2 security into an existing Group 1 security by deleting the old ticker symbol, deleting the old security record, and cross-referencing both in the SYMX1 and OLDNEW#1 files.

DEPR:

Master Option 5. The program will change an existing Group 1 security to a new Group 1 security by deleting the old ticker symbol and security records, going to the \*\*SYM#A-Z files for the new Bunker-Ramo security number, re-entering the new ticker symbol and security record and cross-referencing both with SYMX1 and OLDNEW#1 as necessary.

DEPR:

Master Option 6. The program will merge an existing Group 1 security into an existing Group 1 security by deleting the old ticker symbol and security records, and cross-referencing both in SYMX1 and OLDNEW#1.

DEPR:

Master Option 7. The program will merge an existing Group 1 security with an existing Group 2 security by deleting the old ticker symbol and security record and cross-referencing both in SYMX1 and OLDNEW#1.

DEPR:

Master Option 8. The program will change an existing Group 1 security to a new Group 2 security by deleting the old ticker symbol and security record, re-entering the new ticker symbol and security record, and cross-referencing both in SYMX1 and OLDNEW#1.

DEPR:

The number of security records can be checked against the number of ticker symbol records to ascertain whether they are equal. This feature is used to verify a breakdown during editing to determine it is necessary to examine the contents of the files.

DEPR:

The CATSUPP option allows the user to print the contents of a cumulative

11/26/01 6:30 AM

DEMOPORT (DATAFILE) \*\*DEMOPORT Typical portfolio with cost information  
 BIGPORT (DATAFILE) \*\*BIGPORT Large sample portfolio without cost information  
 N72NEW NEWPOBJ \*\*VALPORT (NEW) Used to create a new portfolio; optionally store it in master portfolio files and link to report options N72EDITP EDITPOBJ \*\*VALPORT (EDIT) Used to edit a portfolio (including additions, deletions and updating); optionally store it in master portfolio files and link to report options N72LISTP LISTOBJ \*\*VALPORT (EDIT) Used by linking from EDITOBJ to list the edited portfolio N72DELP DELPOBJ \*\*VALPORT (DEL) Used to delete a portfolio from the master portfolio files N72MOVE MOVEPOBJ \*\*VALPORT (MOVE) Used to move the portfolio and change the portfolio shortname N72READ READOBJ \*\*VALPORT (LIST) Used to produce a portfolio listing N72VAL VALPOBJ \*\*VALPORT (VAL) Used to type the detailed valuation schedule, (PUR) purchase recommendation schedule, or (SEL) sell recommendation schedule N72VALD VALDOBJ \*\*VALPORT (VALD) Used to type the detailed valuation schedule without price/earnings ratio N72VALX VALPLOBJ \*\*VALPORT (VALX) Used to type the extended valuation schedule showing gain and loss information N72SUM SUMPOBJ \*\*VALPORT (SUM) Used to type the summary valuation schedule N72SUMPL SUMPLOBJ \*\*VALPORT (SUMX) Used to type the extended summary valuation schedule N72TAX TAXPOBJ \*\*VALPORT (TAX) Used to type the schedule of unrealized gains and losses (sorted by gain amount or gain percent) N72GAIN GAINOBJ \*\*VALPORT (GAIN) Used to type the alphabetical schedule of gains and losses N72SIZE SIZEOBJ \*\*VALPORT (SIZE) Used to type valuation schedule sorted by total value of holding ESTATE1 (DATAFILE) \*\*ESTATE1 Sample portfolio for standard estate valuation ESTATE2 (DATAFILE) \*\*ESTATE2 Sample portfolio for weekend estate valuation N72ESTP ESTPOBJ \*\*VALPORT (EST) Used to type the standard estate valuation schedule N72ESTPW ESTPOBJW \*\*VALPORT (EST) Used by linking from ESTPOBJ to type weekend estate valuation schedule N72XSP XSPOBJ \*\*VALPORT (XS) First segment of user-customized access routine; retrieves portfolio and looks up securities information XSP (NONE) \*\*XSP Second segment of user-customized access routine; links from XSPOBJ and used to weave and run (WVR) with user control programs to print user-customized reports XSDEMO (NONE) \*\*XSDEMO Used to explain XS option to user N72COVP COVPOBJ \*\*VALPORT (COV) Used to type the portfolio cover sheet N72HOLDS HOLDSOBJ \*\*VALPORT (HOLDS) Used to list all portfolios holding a particular security N72SETUP SETUPOBJ \*\*VALSETUP Used to gain access to the VALPORT system and initially install the system in a particular user "library". VALPORT (NONE) \*\*VALPORT Master control program for VALPORT programs CHEKPORT (NONE) \*\*CHEKPORT Determine location of errors in source data files USEPORT (NONE) \*\*USEPORT Print detailed report of VALPORT system usage MGTPORT (NONE) \*\*MGTPORT Print summary report of VALPORT usage, reset usage meter EDITCAT (NONE) \*\*EDITCAT Add or edit representatives' initials, list representatives' initials and code numbers, edit forms control LISTCONT (NONE) LISTCONT Permits VALPORT master System Operator to access and print contents of VALPORT master control file EDITCONT (NONE) EDITCONT Permits VALPORT Master System Operator to edit contents of VALPORT master control file N72PRICE PRICEOBJ PRICESEC Used to automatically update VALPORT master securities files from raw Bunker-Ramo data and create exception file N72SUPGN SUPGNOBJ NONE Used by linking from PRICEOBJ to compare current master securities files with reference file created at time of publication of latest securities index; exceptions automatically create a cumulative sup- plement which is stored in SUPPFIL1 SUPPSORT\* SORTSUPP NONE Used to sort contents of SUPPFIL1 into alphabetical sequence storing results in SUPPFIL1 N72NEWS NEWSOBJ \*\*VALSEC (NEW) Used by any user to enter security into user sup- plemental files; used by VALPORT Master User to enter new security into VALPORT master securities files N72FINDS FINDSOBJ \*\*VALSEC (FIND) Used to retrieve data about an individual security from a file when queried with ticker symbol N72CARDS CARDSOBJ \*\*VALSEC (CARD) Used to produce a 3.times.5 card as a permanent record of securities stored in supplemental file N72DELS DELSOBJ \*\*VALSEC (DEL) Used by any user to delete a security from his supplemental securities file or by VALPORT Master User to delete a security from VALPORT master securities files N72EDITS EDITSOBJ \*\*VALSEC (EDIT) Used by any user to edit securities in user sup- plemental securities files and by VALPORT master user to edit securities in VALPORT master securities files N72EPRI EPRIOBJ \*\*VALSEC (EDITPRI) Used to update prices in user supplemental secu- rities files or VALPORT master securities file N72MOVE MOVEOBJ \*\*VALSEC (MOVE) Move security records with automatic cross-indexing N72CATS CATSOBJ \*\*VALSEC (CAT, Provides count of securities masterfiles or CATSUPP,=SUPP) user supplemental security files; and prints cumulative supplement to latest VALPORT Securities Index, and prints alphabetical list of users supplemental securities BACKSEC NONE BACKSEC Backup securities masterfiles and ticker symbol masterfiles RECOSEC NONE RECOSEC Recover from BACKSEC N72SECD SECOBDS \*\*SECDATES Print pricing dates for Bunker-Ramo and VALPORT files CATGEN

NONE CATGEN Strips security name, ticker symbol, security number and classification code from securities masterfiles and stores in CATFILE1 SORTSEC SORTOBJ NONE Alpha sort from CATFILE1 to CATFILE PRINTFCT NONE PRINTFCT Print contents of CATFILE or produce internal print file to produce VALPORT securities index CHEKSECS NONE CHEKSECS Print daily securities exception list from \*\*EXCPLIST VALSEC NONE \*\*VALSEC Master control program for VALSEC programs SUPPSEC NONE \*\*SUPPSEC Print alphabetized listing of Group 3 supplemental securities

Woven

with SBC \*\*CBSORT program to provide customized sort routine.

DETL:

	Statement Description
characters) A, B5, S0	Q\$ Simple alphanumeric variable (up to 18 characters) A, B5, S0 Simple numeric variable Input Q\$ Terminal prints "?". User then types alphanumeric variable DIM R\$(100) Reserve space for an alphanumeric array of 100 (of 18 characters each) OPEN 1, Accesses previously identified
***VALPUSER", file **VALPUSER	for reference as INPUT file 1. Only 4 files may be accessed simultaneously. **NAME File or program with system-wide accessibility
*NAME File or program with user-wide accessibility	NAME File or program with library accessibility GET A\$ Get an alphanumeric data item from a previously opened file X\$(5) An alphanumeric array variable in array X\$, position 5. X1 = X1+1
Increase the value of X1 by 1	RESET 1 Reset pointer to first data item in a file Print ". . ." Print 3 unrepresentable characters in High Speed Printer, i.e. Tab, .ltoreq., .gtoreq., .noteq., index, backspace, exponent If \$0.100 If variable \$0 is .gtoreq., .ltoreq., or .noteq. (unrepresentable) 100 R\$(1)=" Set alphanumeric array variable to 18 blanks Put X\$(5) Place array variable in next field of opened output file DATA "P01" Literal data for later use READ P\$(1) Assigns next data item, e.g., "P01" to the variable, e.g., "P\$(1)" MAT GET M Read numeric data into array IF STR(Z\$,1,1)="=" If the first character of String Z\$ is equal to =; i.e., is a user supplied supplemental security CPU Elapsed computer processing units (approximately 1/4 sec.) since program began CLK Time in seconds since midnite PRINT Skip down one line FNA(X) = Rounds X to nearest integer, i.e., INT (X + 1/2) x = 1.4, 1.5 FNA(X) = 1,2 Pick L\$ Read alpha variable passed from linked program

CLPR:

3. The method of claim 2, including for each security a second key, herein called a ticker symbol and providing a cross-reference file between said ticker symbols and said security numbers, whereby said user may identify his portfolio securities by ticker symbol.

CLPV:

(j) providing a data file for storing sorted uniquely identified portfolios containing data about each security including fields having values corresponding to the security number and the amount of the security holding;

**WEST**

Generate Collection

L31: Entry 21 of 32

File: USPT

Mar 22, 1994

US-PAT-NO: 5297032

DOCUMENT-IDENTIFIER: US 5297032 A

TITLE: Securities trading workstation

DATE-ISSUED: March 22, 1994

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Trojan; Donald R.	New Canaan	CT		
Keenan, III; Edward F.	Franklin Square	NY		
Hyatt; Henry	Glendale	NY		

## ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE	CODE
Merrill Lynch, Pierce, Fenner & Smith Incorporated	New York	NY				02

APPL-NO: 7/ 649761

DATE FILED: February 1, 1991

INT-CL: [5] G06F 15/30

US-CL-ISSUED: 364/408; 340/825.26

US-CL-CURRENT: 705/37; 340/825.26

FIELD-OF-SEARCH: 364/401, 364/406, 364/408, 340/825.26, 340/825.27

PRIOR-ART-DISCLOSED:

## OTHER PUBLICATIONS

Weaver, "Critical Financial Market Systems", 1990, 4/1-4/3.  
Landis, "Multi-Talented System Opens Windows for Trader's World", Wall Street Computer Review, Apr. 1988, pp. 86-89, 93.  
"Apollo Weds Contessa", Computer World, Jun. 1, 1987, p. 41.  
"Frankfurt Advances Technology: Bourse Automates", Communications Week International, May 13, 1991, p. 18.  
"Aria to Offer Mac Trading System", PC Week, Mar. 8, 1988, p. 5.  
Matthew, "OTC Success Spurs Specalized Trading Systems", Wall Street Computer Review, Sep. 1989, pp. 26-38.

ART-UNIT: 231

PRIMARY-EXAMINER: Envall, Jr.; Roy N.

ASSISTANT-EXAMINER: Hazard; Jennifer L.

ATTY-AGENT-FIRM: Hopgood, Calimafde, Kalil, Blaustein, &amp; Judlowe

## ABSTRACT:

A work station for use by a trader of securities on an established market. The work station is integrated into a network of competing market makers for a plurality of securities for trading. A centralized database provides a feed of data on current market events for the securities, including price and transaction data. The work station is specifically programmed to receive the feed of data from the database and convert this datastream into a form conducive to enhanced trading. Seven separate applications permit the trader to track the market, select

trading. Seven separate applications permit the trader to track the market, select securities, bid and ask pricing, market direction and market depth. Traders equipped with the workstation are capable of entering transactions with more complete and copious knowledge about the extant market.

8 Claims, 10 Drawing figures



**WEST**

Generate Collection

L31: Entry 21 of 32

File: USPT

Mar 22, 1994

DOCUMENT-IDENTIFIER: US 5297032 A  
TITLE: Securities trading workstation

**BSPR:**

The trading of financial instruments such as stocks and bonds has largely become a computer supported operation. Almost all significant trading of securities is accomplished by computer pursuant to the established protocols of the major exchanges. For example, on the New York Stock Exchange, orders for specific securities are entered at a terminal operated by a licensed agent with a "seat" on the exchange. This order is processed through a stock "specialist", a firm that is obligated to manage transactions for a given security. The specialist clears the trade at a price reflecting the current supply-demand environment for that security. Upon confirmation of the trade, the parties up-date their respective positions via computer controlled memory. For the most part, the above transaction is accomplished through computer terminals linked together by communication busses or telephone lines.

**DEPR:**

At the workstation, the on-line data is presented through the seven windowed interfaces in a manner as depicted in Table 1 below. The Table 1 representation corresponds directly to the windows presented in FIG. 2 of the workstation, except now detailed information regarding actual trades, market makers, volume bid and ask prices, etc. are presented. In overview, the top two windows in Table 1 are the TICKER applications. The first TICKER application presents current bid and ask prices for select securities. For example, the first entry in Table 1. INTC, represents Intel Corporation with a current bid price of 391/2, a current ask price of 401/2 and the market maker providing these price quotes is represented by the symbol SMDV.

**DEPR:**

Implementation of the various applications provided above is accomplished in a software language compatible to the particular hardware environment chosen. As identified above, the present invention envisions an open architecture operating system, such as UNIX, and, therefore, controlling algorithms must be programmed in a UNIX compatible language, such as "C". In addition, the use of windows to provide the interface between the trader and the application requires certain additional software packages, such as the X11 Window system. Application of these software environments has become, per se, well known to those skilled in this art. The following description of the logic flow path for the workstation applications are presented in flow chart form. The counter T is used to reference past, current and future events as sequentially tracked by the system. For example, NASD(T) is the data feed from the Host for the "T" time period.

**WEST**[Help](#)[Logout](#)[Interrupt](#)[Main Menu](#)[Search Form](#)[Posting Counts](#)[Show S Numbers](#)[Edit S Numbers](#)[Preferences](#)**Search Results -**

Terms	Documents
l33 and field	7

**Database:**

[US Patents Full-Text Database](#)  
[US Pre-Grant Publication Full-Text Database](#)  
[JPO Abstracts Database](#)  
[EPO Abstracts Database](#)  
[Derwent World Patents Index](#)  
[IBM Technical Disclosure Bulletins](#)

**Refine Search:**[Clear](#)**Search History****Today's Date: 11/26/2001**

<u>DB Name</u>	<u>Query</u>	<u>Hit Count</u>	<u>Set Name</u>
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	l33 and field	7	<a href="#">L34</a>
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USPT,PGPB,JPAB,EPAB,DWPI,TDBD	l22 and international near stock near exchange	597	<a href="#">L28</a>
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	l22 and foreign near stock near exchange	0	<a href="#">L27</a>

USPT,PGPB,JPAB,EPAB,DWPI,TDBD	l22 and (foreign near stock or foreign near security)	0	<a href="#">L26</a>
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	l24 and symbol	4	<a href="#">L25</a>
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	l23 and normaliz\$	4	<a href="#">L24</a>
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	l22 and identifie\$	12	<a href="#">L23</a>
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	l21 and ticke\$ same symbol	13	<a href="#">L22</a>
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	l1 and ((705/\$)!.CCLS.)	565	<a href="#">L21</a>
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	l19 and ticke\$ same identifie\$	1	<a href="#">L20</a>
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	l18 and normaliz\$	136	<a href="#">L19</a>
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	l1 and (symbol or symbols)	903	<a href="#">L18</a>
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	l16 and ticke\$	3	<a href="#">L17</a>
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	l1 and normaliz\$ same symbol	18	<a href="#">L16</a>
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	l1 and normaliz\$ near symbol	1	<a href="#">L15</a>
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	l12 and (symbol or symbols)	4	<a href="#">L14</a>
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	l12 and symbol or symbols	204641	<a href="#">L13</a>
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	l1 and global near security	4	<a href="#">L12</a>
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	l1 and global near ticke\$ near securit\$	0	<a href="#">L11</a>
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	l1 and global near ticke\$ near symbol	0	<a href="#">L10</a>
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	l1 and global near symbol	2	<a href="#">L9</a>
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	l6 and global near symbol	0	<a href="#">L8</a>
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	l6 and global near sysmbol	0	<a href="#">L7</a>
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	l1 and ticke\$ near identifie\$	5	<a href="#">L6</a>
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	l2 and global near symbol	2	<a href="#">L5</a>
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	l3 and symbol	6	<a href="#">L4</a>
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	l2 and global near identifie\$	21	<a href="#">L3</a>
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	"relational database" or "relational data base"	5459	<a href="#">L2</a>
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	relational with database or relational with data adj base	5988	<a href="#">L1</a>

**WEST**☐ Generate Collection

L31: Entry 30 of 32

File: USPT

Jun 8, 1982

US-PAT-NO: 4334270

DOCUMENT-IDENTIFIER: US 4334270 A

TITLE: Securities valuation system

DATE-ISSUED: June 8, 1982

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Towers; Frederic C.	Bethesda	MD	20034	

APPL-NO: 5/ 279781

DATE FILED: August 11, 1972

INT-CL: [3] G06F 15/21

US-CL-ISSUED: 364/300

US-CL-CURRENT: 705/36

FIELD-OF-SEARCH: 235/451.1, 340/172.5, 444/1, 364/300

PRIOR-ART-DISCLOSED:

## OTHER PUBLICATIONS

File Organization and Data Mangement; Annual Review of Information Science and Technology, vol. 2, 1967, pp. 123-160, Jack Minker and Jerome Sable.

ART-UNIT: 236

PRIMARY-EXAMINER: Wise; Edward J.

ATTY-AGENT-FIRM: Roberts and Stout

## ABSTRACT:

This discloses a method of operating a general purpose digital computer to produce securities portfolio valuation schedules for multiple simultaneous users. The computer maintains securities information in system-wide files which are updated, both electronically and manually, on a daily basis. The system permits each user to store information about his portfolios, as well as information about supplemental securities not contained in the system-wide files.

5 Claims, 0 Drawing figures

**WEST****End of Result Set**

Generate Collection

L20: Entry 1 of 1

File: USPT

May 22, 2001

US-PAT-NO: 6236980

DOCUMENT-IDENTIFIER: US 6236980 B1

TITLE: Magazine, online, and broadcast summary recommendation reporting system to aid in decision making

DATE-ISSUED: May 22, 2001

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Reese; John P	West Hartford	CT	06117	

APPL-NO: 9/ 057823

DATE FILED: April 9, 1998

INT-CL: [7] G06F 17/60

US-CL-ISSUED: 705/36; 705/26, 705/10

US-CL-CURRENT: 705/36; 705/10, 705/26

FIELD-OF-SEARCH: 705/36, 705/26, 705/27, 705/10

PRIOR-ART-DISCLOSED:

## U.S. PATENT DOCUMENTS

Search Selected

Search ALL

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/> <u>4870579</u>	September 1989	Hey	364/419
<input type="checkbox"/> <u>4989141</u>	January 1991	Lyons et al.	364/408
<input type="checkbox"/> <u>4996642</u>	February 1991	Hey	364/419
<input type="checkbox"/> <u>5006998</u>	April 1991	Yasunobu et al.	364/513
<input type="checkbox"/> <u>5132899</u>	July 1992	Fox	364/408
<input type="checkbox"/> <u>5262941</u>	November 1993	Saladin et al.	364/408
<input type="checkbox"/> <u>5383111</u>	January 1995	Homma et al.	364/401
<input type="checkbox"/> <u>5414838</u>	May 1995	Kolton et al.	395/600
<input type="checkbox"/> <u>5502637</u>	March 1996	Beaulieu et al.	364/408
<input type="checkbox"/> <u>5583763</u>	December 1996	Atcheson et al.	364/55101
<input type="checkbox"/> <u>5812988</u>	September 1998	Sandretto	705/36
<input type="checkbox"/> <u>5819271</u>	October 1998	Mahoney et al.	707/9
<input type="checkbox"/> <u>5893079</u>	April 1999	Cwenar	705/36
<input type="checkbox"/> <u>5897639</u>	April 1999	Greef et al.	707/103

## OTHER PUBLICATIONS

Information regarding Hoover's Online, Retrieved on Aug. 25, 2000 from the Internet .\*

Information regarding AudioReview.Com, Retrieved on Aug. 25, 2000 from the Internet .\*

Fryxell, David A., "Dow Jones News/Retrieval: the `Lifeblood of Business`", Link-Up, vol. 11, No. 5, p. 22(5), Sep. 1994.\*

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Jacso, Peter & Judit Tiszai, "Now Featuring . . . Movie Databases: A Sequel", vol. 19, No. 1, pp. 58-69, Feb. 1996.\*

Zilber, Jon, "The Couch-Potato Mac", MacUser, vol. 12, No. 7, p. 113(2), Jul. 1996.\*

"Lights! Camera! Action! Microsoft Debuts Cinemania 97, Latest Edition of Top-Selling Guide to Movies and Movie Makers", PR Newswire, p. 0917SFTU002, Sep. 17, 1996.\*

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"InvestorsEdge, a Unit of Neural Applications Corporation, Unveils a New Financial Internet Business Unit--Stockpoint," PR Newswire, p. 1020SFM068, Oct. 20, 1997.\*

"Zacks Launches New Investment Web Site," Newsbytes News Network, Nov. 6, 1996.\*

"Zacks, Newsbytes Offer Time Sensitive Stories to Investors," Newsbytes News Network, Sep. 9, 1996.\*

Egan, Jack, "The Virtual Bloomberg," U.S. News & World Report, vol. 123, No. 22, p. 83, Dec. 8, 1997.\*

"Money Talks Adds Daily Small-Cap Interviews and Earnings Analysis," PR Newswire, p. 1219NYF001A, Dec. 19, 1997.\*

Harris, Diane, "Smart Ways to Shop the New Financial Supermarkets," Money, vol. 26, No. 6, pp. 100-109, Jun. 1997.\*

Gianturco, Michael, "Investing on the Web: Surf and Grow Rich!," Forbes, pp. 36-38, Jun. 3, 1996.

ART-UNIT: 275

PRIMARY-EXAMINER: Stamber; Eric W.

ASSISTANT-EXAMINER: Meinecke-Diaz; Susanna

ABSTRACT:

The invention utilizes a computer apparatus to automatically generate displays or reports containing investment security or element recommendations (FIG. 4, box 133) along with an optional summarization of the reasons (FIG. 4, box 134) for the recommendation from magazines, online sources, and broadcast programs for one specific security or element (FIG. 4, box 132) at a time or one specific recommendation source (FIG. 7, box 184) at a time. The aforementioned reports could additionally include the performance of the recommendors (FIG. 5, box 156). A report could also be provided to show the performance statistics (FIG. 8b, box 196, box 204, box 206, box 208, box 210, box 212, box 214) of a recommendation source (FIG. 8b, box 194) for predetermined date ranges (FIG. 8b, box 216) either in an aggregated and averaged format (FIG. 8b) or for each recommendation (FIG. 8c) made by the recommendation source. Additionally, a report could be provided to show the performance of elements or securities that were mentioned (FIG. 51), not just recommended, in magazines, online sources, and broadcast programs.

26 Claims, 57 Drawing figures

**WEST****End of Result Set**☐ **Generate Collection**

L25: Entry 4 of 4

File: USPT

Jun 15, 1993

US-PAT-NO: 5220500

DOCUMENT-IDENTIFIER: US 5220500 A

TITLE: Financial management system

DATE-ISSUED: June 15, 1993

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Baird; Andrew V.	Malden	MA		
Boyer; William E.	Boston	MA		
Pithavadian; Shakunthala S.	Cambridge	MA		

## ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Batterymarch Investment System	Boston	MA			02

APPL-NO: 7/ 409650

DATE FILED: September 19, 1989

INT-CL: [5] G06F 15/20, G06F 15/38

US-CL-ISSUED: 364/408; 364/419

US-CL-CURRENT: 705/36

FIELD-OF-SEARCH: 364/408, 364/406, 364/401, 364/419

## PRIOR-ART-DISCLOSED:

## U.S. PATENT DOCUMENTS

☐ **Search Selected**☐ **Search ALL**

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/> <u>4903201</u>	February 1990	Wagner	364/408
<input type="checkbox"/> <u>4989141</u>	January 1991	Lyons et al.	364/408

## OTHER PUBLICATIONS

Hypercard User's Guide, Apple Computer, Inc., 1988, pp. 15-17.  
Aho et al. (Chapters 4 and 5 of Compilers: Principles, Techniques, and Tools, Addison-Wesley, Reading, Mass. 1986).

ART-UNIT: 231

PRIMARY-EXAMINER: Envall, Jr.; Roy N.

ASSISTANT-EXAMINER: Poinvil; Frantzy

ATTY-AGENT-FIRM: Fish &amp; Richardson

## ABSTRACT:

A method for enabling a user to interactively create and modify a model of an investment strategy to be applied to data pertaining to a set of possible investment entities. A graphical representation of a sequence of statements which

investment entities. A graphical representation of a sequence of statements which describe data manipulations corresponding to the investment strategy is provided; the result of the sequence of statements, when applied to the data, is a selection of a subset of entities from the set of possible entities. The user is enabled to interactively enter and manipulate the statements and the sequence of statements via the graphical interface to alter the investment strategy. The user may "run" the strategy via the graphical interface, using the data to derive the subset of entities.

16 Claims, 46 Drawing figures



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L25: Entry 3 of 4

File: USPT

Jul 13, 1993

US-PAT-NO: 5227967

DOCUMENT-IDENTIFIER: US 5227967 A

TITLE: Security instrument data system without property inapplicable nulls

DATE-ISSUED: July 13, 1993

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Bailey; Stephen C.	Agoura	CA	91301	

APPL-NO: 7/ 326224

DATE FILED: March 20, 1989

INT-CL: [5] G06F 15/21

US-CL-ISSUED: 364/408

US-CL-CURRENT: 705/35

FIELD-OF-SEARCH: 364/401, 364/406, 364/408

PRIOR-ART-DISCLOSED:

## OTHER PUBLICATIONS

Database Design Methodology, M. Vetter, 1981, pp. 86-89.

"Stock Market Portfolio Management System", James Ray, PC Magazine, vol. 6, No. 8, pp. 140-141, Feb. 1989, Microsearch AN 89-052844.

"Portfolio Decisions", Product Literature by Silver Eagle Software, Nov. 1987, Microsearch file of Orbit, AN 87-045391.

ART-UNIT: 231

PRIMARY-EXAMINER: Hayes; Gail O.

ATTY-AGENT-FIRM: Blum; Alvin S.

## ABSTRACT:

This system and method for storage and retrieval of investment asset data in a computer system separates the data into many small files each of limited size and related to a functional attribute of the investment instrument. By storing the data in these separate files rather than all together as in the prior art, one develops a system that appears more complex, but is better suited to computer processing. It is faster, more easily programmed, less prone to error, and more readily expanded to handle diverse investment vehicles with different attributes such a unique interest formulations, discount bonds and the like without impact on previously recorded issues.

7 Claims, 13 Drawing figures

**WEST**

Generate Collection

L34: Entry 4 of 7

File: USPT

Feb 6, 2001

US-PAT-NO: 6185567

DOCUMENT-IDENTIFIER: US 6185567 B1

TITLE: Authenticated access to internet based research and data services

DATE-ISSUED: February 6, 2001

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Ratnaraj; Paul J.	Sicklerville	NJ		
McCartney; William Gerard	Philadelphia	PA		
To; Son	Philadelphia	PA		
Crispi; Steven J.	Philadelphia	PA		
Akhavain; Jalal D.	New York	NY		

## ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE	CODE
The Trustees of the University of Pennsylvania	Philadelphia	PA				02

APPL-NO: 9/ 087184

DATE FILED: May 29, 1998

INT-CL: [7] G06F 17/30

US-CL-ISSUED: 707/10; 705/26, 707/5, 707/8, 707/100, 709/203

US-CL-CURRENT: 707/10; 705/26, 707/100, 707/5, 707/8, 709/203

FIELD-OF-SEARCH: 707/2-6, 707/10, 707/8, 707/100, 707/103, 707/202, 705/26, 705/27, 709/203

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected

Search ALL

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/> <u>5398336</u>	March 1995	Tantry et al.	707/103
<input type="checkbox"/> <u>5708780</u>	January 1998	Levergood et al.	395/200.12
<input type="checkbox"/> <u>5778367</u>	July 1998	Wesinger, Jr. et al.	707/10
<input type="checkbox"/> <u>5819255</u>	October 1998	Celis et al.	707/2
<input type="checkbox"/> <u>5826014</u>	October 1998	Coley et al.	395/187.01
<input type="checkbox"/> <u>5826265</u>	October 1998	Van Huben et al.	707/8
<input type="checkbox"/> <u>5859972</u>	January 1999	Subramaniam et al.	709/203
<input type="checkbox"/> <u>5920873</u>	July 1999	Van Huben et al.	707/202
<input type="checkbox"/> <u>5937406</u>	August 1999	Balabine et al.	707/100
<input type="checkbox"/> <u>5963915</u>	October 1999	Kirsch	705/26
<input type="checkbox"/> <u>6094654</u>	July 2000	Van Huben et al.	707/8

ART-UNIT: 271

PRIMARY-EXAMINER: Alam; Hosain T.

ASSISTANT-EXAMINER: Alam; Shahid

ATTY-AGENT-FIRM: Woodcock Washburn Kurtz Mackiewicz &amp; Norris LLP

## ABSTRACT:

Access to a database is provided via the Internet using a World Wide Web server including a search engine, a CGI gateway and user selectable data queries for extracting data, generating reports, and the like. Access by the user is authenticated by querying the user's central machine for authentication. The authentication process operates by sending a page request from the web browser through three checkpoints before the requested page can be served to the web browser. The first checkpoint determines if the requested page is protected. If not, the requested page is served to the web browser. However, if the requested page is protected, the authentication process on the web server checks the host name of the system where the page request is coming from. If the domain of the requesting host is the same domain specified in the web authentication configuration, then the requested page is served to the web browser. However, if the page request is determined to come from outside of the domain of the web server, then the authentication process checks a "cookie" from the web browser to determine if the requesting user has been authenticated as an authorized user earlier in the same session. If the cookie has been "set" during the login procedure, then the requested page is served to the web browser. Otherwise, the user is prompted with a login page. After the user ends the web browser session, the cookie is cleared. Data Query software at the web server permits queries initiated via a web browser to be completed off-line and the results e-mailed to the initiator of the request.

5 Claims, 4 Drawing figures